

ABSTRACT OF THE DISCLOSURE

5 A technique is provided for non-uniform weighting in back-projection calculations in tomosynthesis. The non-uniform weighting may include weighting based on a count map of the number of times pixels of individual slices are traversed by radiation in different projections. Weighting may also include non-uniform functions for contributions of features at different slice level to the sensed X-ray attenuation system response inconsistencies are accounted for by further weighting based upon projection maps which may be created in separate system calibration or configuration routines.